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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/789,300

02/26/2004

Jinn-Yeh Chien

67,200-959

7643

7590

06/21/2006

TUNG & ASSOCIATES

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EXAMINER

TU, CHRISTINE TRINH LE

ART UNIT

PAPER NUMBER

2138

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/789,300

Applicant(s)

CHIEN, JINN-YEH

Examiner

Christine T. Tu

Art Unit

2138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-10 is/are allowed.
- 6) ☒ Claim(s) 1-3, 11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/26/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 112***

1. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 (depends on claim 13):

It is not clear where and when is the **first** multiplexer being recited since second multiplexer is being claimed at line 3.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wrape et al. (5,907,562 and Wrape hereinafter).

Claims 1 and 2:

Wrape discloses the invention substantially as claimed. Wrape teaches (figure 2) a scan path test structure comprising registers (30 & 32) having an output signal (15) from one register (30) to the test data input TDI of another register (32). In addition to this connection, the output signal (15) of one register (30) is also coupled to the functional data input D of another register (32) through combinatorial logic (figure 2, column 1 lines 22-40, column 2 lines 22-23).

Wrape further teaches (figure 4) details of a register. Each register comprises a multiplexer (42) and a flip-flop (44) such that the multiplexer (42) selects either the functional data input D or the test data input TDI and such the selected data is input to the flip flop (44) (column 3 lines 35-40).

Wrape does not explicitly teach the test structure. Wrape, however, teaches the combination logic (34) (figure 4). It would have been obvious to one skilled in the art to realize that Wrape's combination logic (34) would have been named as "test structure". One having ordinary skill in the art would be motivated to do so because naming Wrape's combination logic (34) as "test structure" would not affect the performance of Wrape's combination logic (34).

Claim 3:

Wrape teaches that the register (figure 4) comprises the multiplexer (42) having a TDI input (TDI) and such a TDI is connected to the output (15) of the preceding register (30) (figure 2). The multiplexer (42) also has an output, which is connected to the input of the flip-flop (44) (figure 2).

Claim 11:

This claim is similar to claim 1 with additional n-bit shift register including n data latches and n-1 test structures. Referring to Wrape 's figure 2, Wrape teaches n latches (30 & 32) [wherein n=2] and (n-1) combinational logic (34) [wherein n=2].

Claims 13-15:

Claims 13-15 are rejected for reasons similar to those set forth against claims 1-3.

***Allowable Subject Matter***

4. Claims 4-7 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 8-10 are allowable over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine T. Tu whose telephone number is (571)272-3831. The examiner can normally be reached on Mon-Thur. 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571)272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christine T. Tu  
Primary Examiner  
Art Unit 2138

June 14, 2006